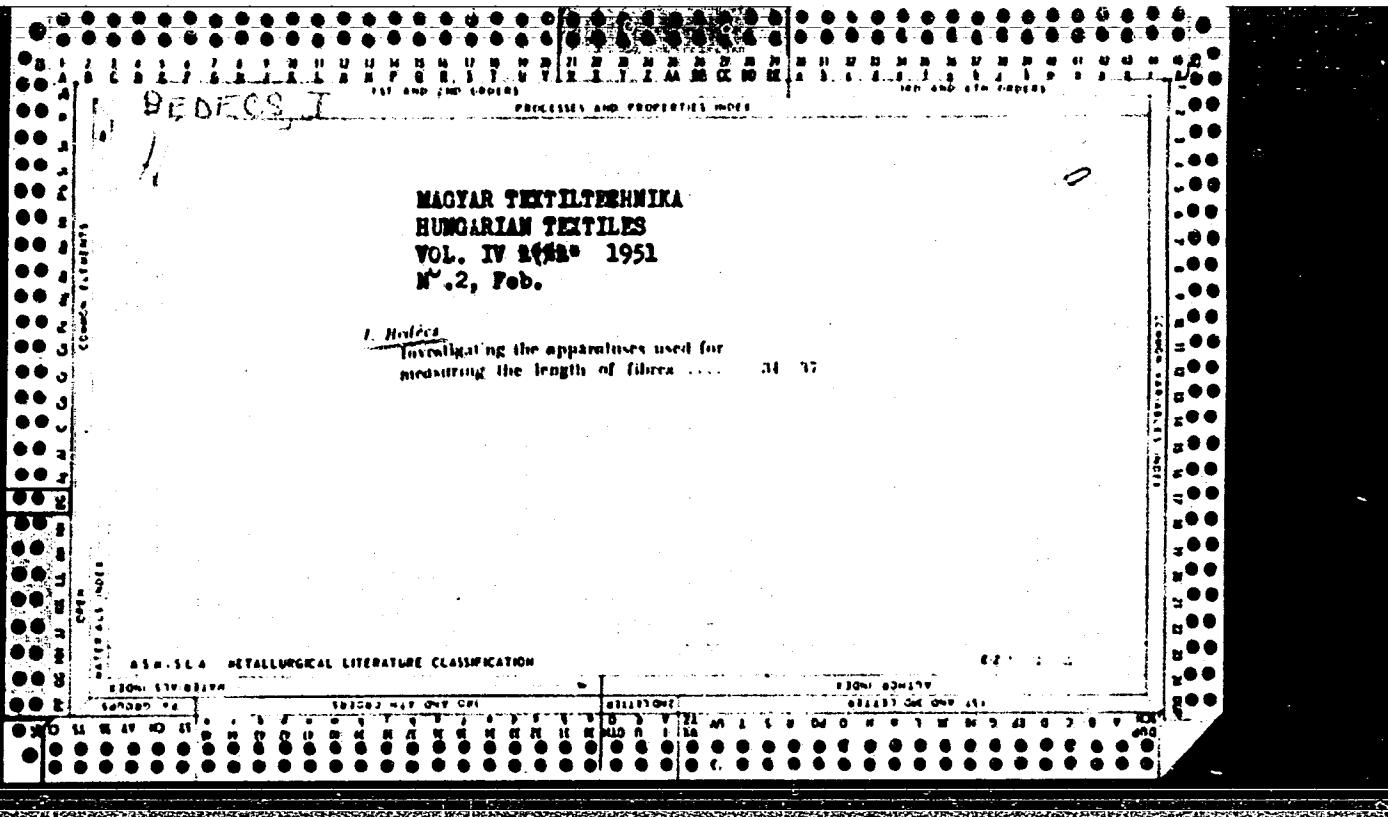


BEDEBASHVILI, G.G., kand. veterin. nauk

Neural form of pasteurellosis in cattle. Veterinariia 38 no.11:
26-27 N '61 (MIRA 18:1)

1. Grusinskiy zooveterinarnyy uchebno-issledovatel'skiy
institut.



BEOVES, L.

Sz. Investigation of the 1950 domestic cotton crop - A 1950 *száraz termelői gyűjtői raktárának* (golden exchange) by Dr. Tivadar and I. Hodos Hungarian Textiles Ministry, Budapest, Vol. IV, No. 6, pp. 175-177, June 1951 (Fig. 1 tab.)

The industrial standard of the 1950 cotton crop had dual purpose: (a) to point out the shortcomings which can be corrected by proper technicalization and industrialization; (b) to give practical advice to specialists in the industries for the economical realization of the new raw material trading was extended in fiber length, tensile strength, and fineness of the cotton fibers. The staple length of the first pickings from a definite region varied between 23.31 and 26.87 mm. Second pickings were shorter in all regions. The staple lengths of top crop picked after frost varied from 19.32 to 21.51 mm. The tensile strength of cotton from one region ranged from 1.25 to 6.29 g for the first pickings and from 1.15 to 5.15 g for the second pickings. In the case of the second picking, the importance of cotton grade and the degree of maturity lower than was the case with the first. The tensile strength of the first pickings varied from 3.16 to 8.7 g. It maintained a batch percentage of impurities and the tensile strength of the fibers was very disparate. The number of furnaces of fibers from one region in the case of the first picking ranged from 17.17 to 19.00 kg and in the case of the second pickings from 1.00 to 14.00 kg. Third pickings contained finer fibers and also a large quantity of immature fibers.

LASLO, Ya. [Laszlo, I.]; PETER, M.; FILEP,D. [Filip. D.]; ABRAKHAM, Sh.
[Abraham, A.]; BALINT, Ye. [Balint,E.]; DOMOKOSH, L. [Domocos, L.];
KASA,L. [Qasa, L.]; DERDI,P.; HEDÉ, Sh. [Beda,S.]

Experimental studies on epidemic hepatitis. Vop. virus. 8 no.2:
221-224 Mr-Ap'63
(MIRA 16:12)

1. Kafedra mikrobiologii i inframikrobiologii Mediko-farmatsev-
ticheskogo instituta Tyrgu-Muresh, Rumyniya.

BEDECS, Istvan; KOHALMI, Konrad, okl. gepeszmerok

Increasing the intensity of carding on the cotton industry carding machines by modifying the preliminary opener. Magy textil 13 no.11: 475-480 N '61.

BEDEK, Branko, ing. (Zagreb); PUCAR, Zvonimir, dr. ing., (Zagreb)

"Inkoforan 60," an apparatus for the electrophoresis on filter paper. Kem ind 10 no. 3:81-84 Mr '61.

BEDKER, N.L., meditsinskaia sestra (Leningrad)

The work of Russian nurses during the Russo-Turkish War in the
years 1877-1878. Med. sestra, no.9:27-31 S '54. (MLRA 7:9)

(NURSING PROFESSION, history
Russia, Russo-Turkish War)

BEDEKOVIC, Marija, inz.

Current aphicides. Kem ind ll no.ll:652 N '62.

1. Institut za zastitu bilja, Zagreb.

BEDEKOVIC, Vladimir

Yugoslavia (430)

Technology

Dimenzioniranje glavnih elementa trase
trkalisnih staza za bicikliste i motocikliste.
Beograd, Gradevinska knjiga, 1950. 22 p. (Savezni
institut za gradevinarstvo, Grupa: Putevi.
Publikacija, br. 1) (Dimensions set for the main
elements of bicycle and motorcycle race tracks).

East European Accessions List. Library of
Congress. Vol. 2, no. 3, March 1953.

UNCLASSIFIED

BFDEKOVIC, VLADIMIR

Yugoslavia (430)

Technology

Razmatrje pred standardizaciju građevinskih
bitumena. Beograd, Građevinska Knjiga, 1951. 33 p.
(Svezni institut za građevinarstvo. Publikacija,
br. 5) (The situation before the standardization
of building bitumens.)

East European Accessions List, Library of Congress
Vol. 2, nos. 1 & 2, Jan.-Feb., 1953, UNCLASSIFIED

BEDEKOVIC, V.

BEDEKOVIC, V. Provisional technical regulation PTP 10, p. 453.

Vol. 3, no. 12, Dec. 1955

CESTE I MOSTOVI

TECHNOLOGY

Zagreb, Yugoslavia

So: East European Accessions, Vol. 5, No. 5, May 1956

BEDEKOVIC, V.

BEDEKOVIC, V.
Activity of the Zagreb Engineering Laboratory in recent years. p.216

Vol. 3, No. 6, June 1955 CESTE I MOSTOVI Zagreb, Yugoslavia

SO: Monthly List of East European Accessions, (EEAL), LC, Vol.5, No.3
March, 1956

BEDEKOVIC, V.

For or against? Reportage a little late but still of current interest.
p. 342. CESTE I MOSTOVI. Zegreb. Vol. 3, No. 9, Sept. 1955

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, No. 2, Feb. 1956

BEDEKOVIC, V.

From the themes of road construction institutes. p. 241
CESTE I MOSTOVI (Uprava za ceste NR Hrvatske) Zagreb.
Vol. 4, no. 7, July 1956

SOURCE: East Europe Accession Lists (EEALS),
Library of Congress, Vol.5, no. 11, Nov. 1956

YUGOSLAVIA/Chemical Technology - Processing of Natural Gases and H.
Petroleum. Motor and Rocket Fuel. Lubricants.

Abs Jour : Ref Zhur - Khimiya, No 16, 1958, 55206

Author : Bedeckovich

Inst : -

Title : Determination of the Required Bitumen Content in
Asphalt by Means of the Approximate Thickness of
Bitumen Film.

Orig Pub : Tehnika, 1957, 12, No 3, Nase gradevinarstvo, 11, ~~nos~~,
377-85.

Abstract : Based on laboratory and practical observation, a method
is suggested for the bitumen input in the manufacture
of asphalt. It is based on determining the amount of
bitumen that is required for wetting sand (in this cal-
culation the granular composition of the sand has to
be known). The empirical equations, the diagrams and

Card 1/2

PEDEKOVIC, V.

Road damages, their causes, the method of removing, and proposals. p. 23.

PUT I SACERACAJ. (Drustvo za puteve Srbije)
Beograd, Yugoslavia. Vol. 4, no. 7/10, July/Oct. 1958.

Monthly list of East European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959.

Uncl.

BEDEKOVIC, V.

New experiences in the application of bituminous mortar in road construction.
p. 296.

PUT I SAOBRACAJ. (Drustvo za puteve Srbije)
Beograd, Yugoslavia. Vol. 4, no. 7/10, July/Oct. 1958.

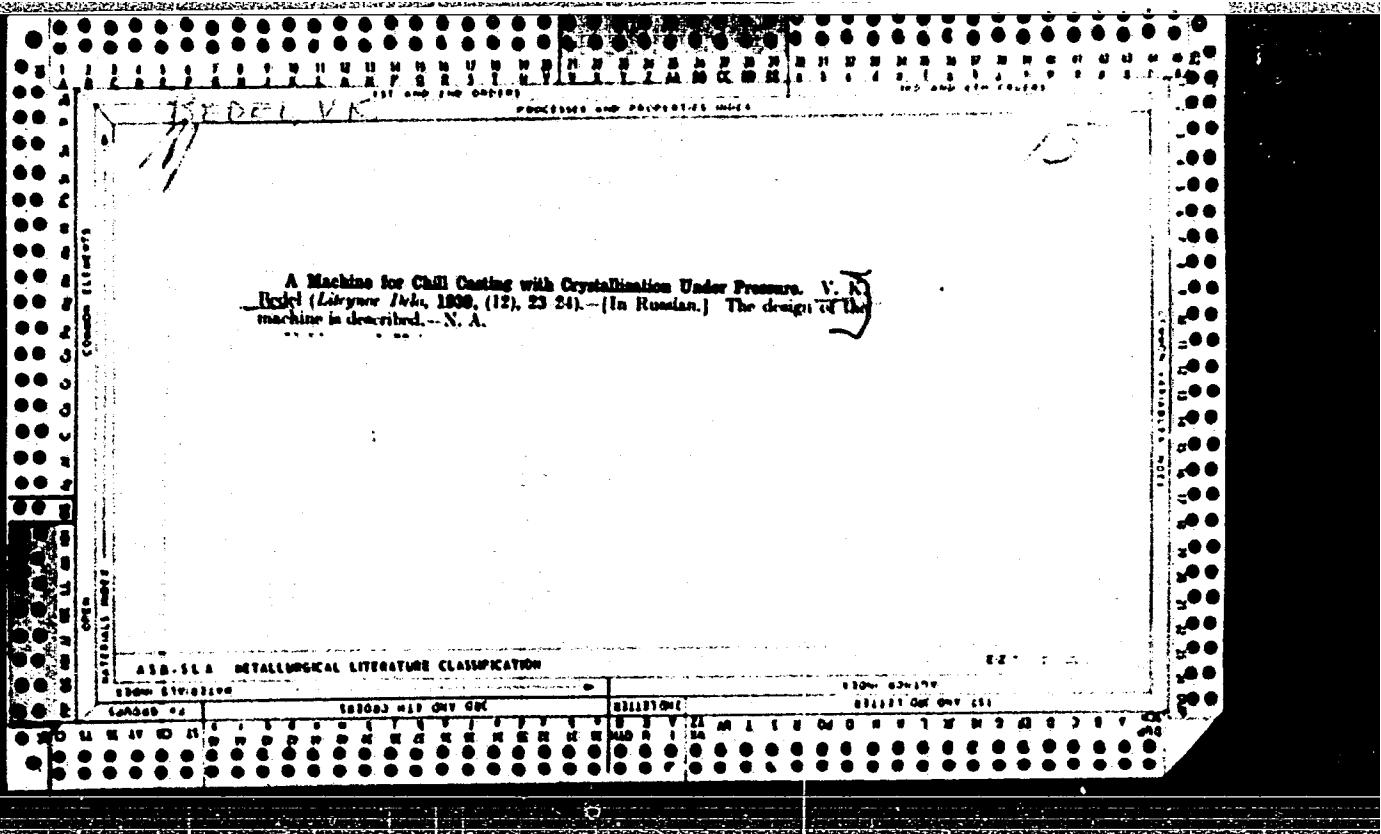
Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 8, Aug. 1959.

Uncl.

BEDECSS, Istwan, ROZMARYNOWSKI, Wladyslaw [translator]

Determination of the content of impurities in cotton and
cotton waste by means of the pneumatic apparatus for the
determination of impurities in cotton. Przegi wlokienn
16 no.7/8:370-374 Jl-Ag '62.

1. FTI, Budapest (for Bedecs).



13 DE DEC 1988

MA

13

Die-Casting of Bronze Parts. V. K. Bedel (*Liteynoye Delo [Foundry Practice]*, 1939, (8), 25-28; *Chem. Zentral.*, 1939, III, (1), 223). - [In Russian.] R. describes details of the manufacture of dies for casting bronze parts (e.g. bronze with 14% tin), and the process of the casting itself, and discusses causes of failures.

1/13

BEDEL', V.K.

Improving the equipment for low-pressure casting. Lit.proizv.
no.10:15-16 0 '64. (MIRA 18:4)

1. BEDEL', V.K.; VYKHUKHOLEV, V.F.; IGNATENKO, Yu.F.
2. USSR (600)
4. Founding
7. Improving the quality of technical literature ("Casting non-ferrous alloys in metal forms." K.V. Peredel'skiy, Reviewed by V.K. Bedel', V.F. Vykhukholev, Yu.F. Ignatenko). Lit.proizv. no. 4, 1953.
9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

"APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000204120018-3

BEDEL', V.K.

Low-pressure pouring without ladle. Lit.preizv.no.4:20-22 Ap '56.
(Die casting) (MLRA 9:7)

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000204120018-3"

BEDEL', Vladimir Konstantinovich, inzh.; OKUNEVA, A.I., inzh., vedushchiy
red.; ZASLAVSKIY, M.L., inzh., red.; PONOMAREV, V.A., tekhn.red.

[New method of casting of large thin-walled light alloy parts
under low pressure] Novyi sposob otlivki krupnogabaritnykh tonko-
stennykh detalei iz legkikh splavov pod nizkim davleniem. Moskva,
Filial Vses.in-ta nauchnoi i tekhn.inform., 1956. 15 p.
(Informatsiia o nauchno-issledovatel'skikh rabotakh. Tema 2,
no.I-56-219) (MIRA 10:12)

(Die casting)

PHASE I BOOK EXPLOITATION

SOV/5781

Bedel', Vladimir Konstantinovich, Engineer

Lit'ye pod nizkim davleniyem (Low-Pressure Casting) Moscow, Mashgiz, 1961.
227 p. 10,000 copies printed.

Reviewer: G. F. Balandin, Candidate of Technical Sciences; Ed. of Publishing
House: A. I. Sirotin, Engineer; Tech. Ed.: L. P. Gordeyeva; Managing Ed. for
Literature on the Hot Working of Metals: S. Ya. Golovin, Engineer.

PURPOSE: This book is intended for technical personnel engaged in casting; it may
also be useful to students in schools of higher education.

COVERAGE: A new low-pressure method for making aluminum- and magnesium-alloy
castings in sizes up to 1 meter and with wall thicknesses of 2 to 2.5 mm is
presented. The casting process and equipment design are described, and
practical recommendations, regimes, materials, and specifications for standard
and special equipment are discussed. According to the author, this method is
the first to use program control for regulating the mold-filling rate in low-
pressure casting (Author's Certificate No. 106276). It was awarded First Prize
in the 1959 Exhibition of the Achievements of the National Economy of the USSR.

Card 1/5

S/128/63/000/001/004/008
A004/A127

AUTHOR: Bedel', V.K.

TITLE: Unit-head machines for low-pressure die casting

PERIODICAL: Liteynoye proizvodstvo, no. 1, 1963, 12 - 13

TEXT: The author presents a brief survey on the mechanization and automation of foundry processes and emphasizes the importance of new low-pressure die casting methods developed in the USSR, England and the USA. He mentions a new foundry plant put in operation by the US Chevrolet Works in the State of New York and points out that low-pressure die casting results in improved surface finish, density of structure and clear contours. A detailed description is given of a design model of a new unit-head die-casting machine for low-pressure casting, which consists of a set of power heads with hydraulic drive, intermediate supports, base frame, metal receptacle with automatic metal feeder, hydraulic control station, relay circuit and control panel. There are 3 figures. ✓

Card 1/1

BEDEL', V.K.

Machine units for low-pressure casting. Lit. proizv. no.1:12-13
Ja '63. (MIRA 16:3)

(Foundries—Equipment and supplies)
(Die casting)

"APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000204120018-3

BEDEL', V.K.

Low pressure casting in European plants. Lit. proizv. no.7:
45-46 Jl '63. (MIRA 17:1)

APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000204120018-3"

L 2h194-65 EAT(d)/EAT(m)/EVA(d)/EWP(v) /EWP(t)/EWP(k)/EWP(h)/EWP(t)/EWP(l)
PF-4 JD
ACCESSION NR: AP4047653 S/0128/64/000/010/0015/0016

AUTHOR: Bedel', V. K. (Engineer)

3

TITLE: Improvement in the equipment for low pressure casting

SOURCE: Liteynoye proizvodstvo, no. 10, 1964, 15-16

TOPIC TAGS: low pressure casting, modern casting equipment

ABSTRACT: This short communication is a review of the progress made in recent years in the field of construction of equipment for low pressure casting and of the modern procedures. Among other improvements, essential changes were made in the hermetization of the metal container (rubber rings instead of asbestos), the metal duct, casting dies, control system for molten metal feeding, and the use of a neutral atmosphere (CO_2) for prevention of oxidation. Details of contemporary Soviet machines are given and some information is reported from the "Machinery", London, 98, 953 (1961). Orig. art. has: 7 figures

Card 1/2

L 21194-65

ACCESSION NR: AP4047653

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: MM

NO REF Sov: 000

OTHER: 001

Car 8/2

BEDELADZE, Z., master-povar

This is our urgent assignment. Obshchestv.pit. no.11;26-27
N '60. (MIRA 14:3)

1. Stolovaya No.22 Pravoberezhnogo tresta stolovykh, Tbilisi.
(Cookery—Vocational guidance)

L 3183-66

ACCESSION NR: AP5013833

UR/0103/65/026/005/0764/0769
62-50

AUTHOR: Bedel'bayev, A. K. (Deceased) (Alma-Ata); Khodzhanov, A. S. (Alma-Ata)

TITLE: On isoperimetric problems of control systems

SOURCE: Avtomatika i telemekhanika, v. 26, no. 5, 1965, 764-769

TOPIC TAGS: automatic control, optimum control, isoperimetric problem

ABSTRACT: The controlled system is described by the system of equations

$$\dot{\eta}_s = \sum_{k=1}^n b_{sk} \eta_k + \eta_s \xi, \quad \eta_s(0) = \eta_s^0 \quad (s = 1, 2, \dots, n), \quad (1)$$

where b_{sk} are given constants, η_k are phase coordinates of the controlled system, and $\xi(t)$ is the control function. From the class of continuous functions $\xi(t)$ constrained by some conditions

$$\int \xi^2(t) dt = K_0 < \infty \quad (A)$$

Card 1/3

L 3183-66

ACCESSION NR: AP5013833

or

$$\int_{-\infty}^{\infty} \xi^2(t) dt = K_1 < \infty$$

(B)

where K_0 and K_1 are given positive constants, the control function ξ is sought which ensures the asymptotic stability of the controlled system and minimizes the performance functional

$$I = \int_{-\infty}^{\infty} F(\eta) dt,$$

(2)

where $F(\eta)$ is a given positive quadratic form. It is shown that equation (1) can be reduced to a canonical form by using the Lur'ye transformation. By applying known variational methods, the Lagrangians for cases (A) and (B) are formed and Euler-Lagrange equations are derived. A system of algebraic equations is derived for calculating the arbitrary constants and the Lagrange multiplier. Finally, the equation in the form of a determinant is derived from which the control function $\xi(t)$ corresponding to asymptotic stability can be determined. Orig. art. has: [IX] 32 formulas.

Card 2/3

L 3183-66

ACCESSION NR: AP5013833

ASSOCIATION: none

SUBMITTED: 20Apr64

ENCL: 00

SUB CODE: IE, MA

NO REF SOV: 004

OTHER: 000

ATT PRESS: 4017

PC

Card 3/3

BEDEL' BAYEV, A. K.

Dissertation: "An Investigation of the Stability of Nonsteady Motion of Several Regulated Systems." Cand Phys-Math Sci, Leningrad Polytechnic Inst, Leningrad, 1954. (Referativnyy Zhurnal--Matematika, Moscow, Aug 54)

SO: SUM 393, 28 Feb 1955

BEDEL'BAJEV, A.K.

SUBJECT USSR/MATHEMATICS/Differential equations CARD 1/2 PG - 485
 AUTHOR BEDEL'BAJEV A.K.
 TITLE On the construction of the Liapunov function in the form of a quadratic form.
 PERIODICAL Izvestija Akd.Nauk Kazach SSR 4, (8) 24-37 (1956)
 reviewed 1/1957

Let be given a system of n linear differential equations with constant coefficients

$$(1) \quad \dot{\eta}_s = \sum_{k=1}^n c_{sk} \eta_k \quad (s=1,2,\dots,n).$$

Let the real parts of the roots of the characteristic equation be negative. The functions $\eta_{ks}(t)$ shall form the fundamental solution system of (1), where $\eta_{ks}(0) = \delta_{ks}$. Then, according to Malkin (Priklad.Mat.Mech, 16, 239-242 (1952))

$$(2) \quad V = \sum_{s=1}^n \int_0^\infty \left[\sum_{k=1}^n \eta_k(t) \eta_{ks}(t) \right]^2 dt$$

is a Liapunov function for (1). By aid of the Laplace transformations and the results of Kac (Priklad.Mat.Mech. 16, 362-364 (1952)) the author brings (2) into a form being suitable for computations. As a Liapunov function he obtains a quadratic form in η_s , the coefficients c_{km} are given by

Izvestija Akad.Nauk Kazach. SSR 4, (8) 24-37 (1956) CARD 2/2 PG - 485

$$(3) \quad \sigma_{km} = \frac{(-1)^{n-1}}{a_0 D} \sum_{s=1}^n G_{km}^{(s)} \quad (k, m=1, 2, \dots, n).$$

Here a_0 is the coefficient of the highest power of the characteristic equation of (1), D is the greatest Hurwitz determinant and $G_{km}^{(s)}$ arises from this by replacing the first row a_1, a_3, a_5, \dots by certain functions g_{skm}^i of the coefficients c_{sk} of (1). A practical computation of (3) is possible but already a computed example ($n=3$) shows that it becomes still very extensive for greater n . Besides the question remains which part of the actual maximal region of stability is characterized by (3). The obtained result is used in order to approximate the duration of the transition process in a linear system (Cetajev: Priklad.Mat.Mech. 15, 371-372 (1952)).

BEDEL'BAYEV, A.X.,(Alma-Ata)

Method of development of A.M.Liapunov's functions. Prikl.mekh.2
no.4:373-377 '56. (MLRA 10:3)

1. Kazakhs'kiy gornichyo-metalurgiyniy institut.
(Differential equations, Linear)

SOV/124-58-11-12085

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 11, p 18 (USSR)

AUTHOR: Bedel'bayev, A. K.

TITLE: On the Stability of Nonlinear Automatic-control Systems (K ustoychivosti nelineynykh avtoreguliruyemykh sistem)

PERIODICAL: Izv. AN KazSSR. Ser. matem. i mekhan., 1957, Nr 6 (10), pp 51-59

ABSTRACT: The author examines the problem of stability relative to large disturbances of an automatic-control system having variable coefficients. In section one he sets forth some of the results obtained by N. G. Chetayev and N. D. Moiseyev in their studies of the stability problem in the case of linear systems having variable coefficients. In section two, to solve the problem, he proposes a Lyapunov function of the well-known form

$$Q + \int_0^\sigma f(\sigma) d\sigma$$

wherein Q is a quadratic expression (constructed by the N. G. Chetayev method), which is the Lyapunov function for the system

Card 1/2

SOV/124-58-11-12085

On the Stability of Nonlinear Automatic-control Systems

with its servomotor disconnected. The paper contains neither new results nor necessary references to the literature.

B. S. Razumikhin

Card 2/2

BEDEL'BAEV, A.K.
BEDEL'BAEV, A.K.

Konstantin Eduardovich TSiolkovskii. Vest.AM Kazakh.SSR 13 no.9:122-123
S '57. (MIRA 10:10)
(TSiolkovskii, Konstantin Eduardovich, 1857-1935)

SEDELBAYEV, A.K.

16(1), 14(10) pp 2+4

PHASE I BOOK EXPLOITATION SOV/1281

Akademiya nauk Kazakhskoy SSR. Sektor matematiki i mekhaniki

Trudy, t. 1 (Transactions of the Mathematics and Mechanics Section, Kazakh S.S.R. Academy of Sciences, v. 1) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1958. 207 p. 2,500 copies printed.

Eds.: Vaslavskiy, N.A. and Shevchuk, T.I.; Tech. Ed.: Rorokina, Z.P.; Editorial Board: Akushskiy, I.Ya., Archashnikov, V.P., Zhaubykov, O.A. (Resp. Ed.), Zhilenko, L.G. (Resp. Secretary), Molyukov, I.D., Strel'tsov, V.V.

PURPOSE: This book is intended for scientists, and students taking senior physics and mathematics courses at vuzes.

COVERAGE: The book contains contributions by scientists in Kazakhstan in the fields differential equations, theory of elasticity, algebra, nomography, calculation by machine, theory of plasticity, mechanics of a medium of variable mass, etc. It is dedicated to the 10th anniversary of the organization of the Sektor matematiki i mekhaniki Akademii nauk Kazakhskoy SSR (Mathematics and Mechanics Section, Academy of Sciences, Kazakh SSR.)

Card 1/4

Transactions of the Mathematics (Cont.)

SOV/1281

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Card 2/4

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Card 3/4

AUTHOR: Bedel'bayev, A.K. (Alma-Ata) 102-58-1-3/12
TITLE: Derivation of Lyapunov's Functions in Quadratic Form, and
Their Applications to Stability in Controlled Systems
(Pro pobudovu funktsiy Lyapunova u vyglyadi kvadratichnoy
formy ta ikh zastosuvannya do stiykosti regul'ovanykh system)

PERIODICAL: Avtomatika (Kiev), 1958, Nr 1, pp 37 - 43

ABSTRACT: A method of constructing Lyapunov's v-functions previously given by the same author (Prikladna Mekhanika (Kiev), Vol 2, Nr 4, 1956) is generalised and an application to stability in control systems is described. The quadratic form is that employed by Kats (Prikladnaya Matematika i Mekhanika, 1952, Vol 16, Nr 3); an expression, Eq.(12), p 39, is given for the coefficients in this form and, since these coefficients are expressed in terms of the system parameters, the stability region can be derived in terms of them. This is of particular value in practical design studies. The method and formulae are illustrated by considering at some length an example for a third-order system. There are 7 Soviet references.

SUBMITTED: May 10, 1957

Card 1/1

BHDEL'BAYEV, A.K.

Criteria for discriminating dangerous and safe sections of the
stability domain border in a class of automatic control systems.
Trudy Sekt.mat. i mekh. AN Kazakh.SSR 1:50-61 '58.

(MIRA 11:12)

(Automatic control)

SOV/124-59-10-11209

Translation from: Referativnyy zhurnal, Mekhanika, 1959, No. 10, p. 16 (USSR)

AUTHOR: Bedel'bayev, A. K.

TITLE: On the Stability of Transient Motions of One Class of Auto-
Controllable Systems

PERIODICAL: Tr. Sektora matem. i mekhan. AS KazSSR, 1958, Vol. 1, pp. 151-159

TEXT: The system of equations of indirect control is discussed, which has
one non-linearity and time-dependent coefficients:

$$\dot{\eta}_s = \sum_{k=1}^n b_{sk}(t) \eta_k + n_s(t) \xi \quad (s = 1, 2, \dots, n)$$

$$\xi = f(\delta), \quad \delta = \sum_{s=1}^n j_s(t) \eta_s - \xi$$

The author proves three theorems of the system stability on the whole by the
direct Lyapunov method.

Ye. P. Popov

VB

Card 1/1

BENDIR' BAYEV, A.K.

Reducing the problem of programmed control to a problem of
stabilized condition control. Izv.AN Kazakh.SSR.Ser.mat., 1
mekh. no.7:77-88 '59. (MIRA 12:5)
(Automatic control) (Differential equations)

BEDEL'BAYEV, A.K.; KHODZHANOV, A.S.

Selecting parameters for stable linear controllable systems. Izv.
AN Kazakh SSR Ser. mat. i mekh. no.8:104-113 '59. (MIRA 13:5)
(Automatic control)

PHASE I BOOK EXPLOITATION

SOV/4621

Bedel'bayev, Abdes Kuramayevich

Ustoychivost' nelineynykh sistem avtomaticheskogo regulirovaniya (Stability of Nonlinear Automatic-Control Systems) Alma-Ata, Izd-vo AN Kazakhskoy SSR, 1960. 163 p. Errata slip inserted. 1,775 copies printed.

Sponsoring Agency: Akademiya nauk Kazakhskoy SSR.

Resp. Ed.: O.A. Zhautykov, Candidate of Physics and Mathematics; Ed.: V.V. Aleksandriyskiy; Tech. Ed.: P.F. Alferova.

PURPOSE: This book is intended for engineers and scientific workers in the field of automatic control and for students at schools of higher education specializing in this field.

COVERAGE: The book is based on a series of lectures given by the author during the 1956-57 school year as a special course at the Department of Mechanics and Mathematics of the Kazakhskiy gosudarstvenny universitet imeni S.M. Kirova (Kazakh State University imeni S.M. Kirov). The book investigates the stability of nonlinear automatic-control systems by Lyapunov's direct method. The author considers several practical methods for setting up Lya-

Card 1/6

Stability of Nonlinear Automatic-Control Systems

SOV/4621

punov's function; A.I. Lur'ye's linear transformations which permit transforming the initial equations of control systems into equations of canonical form; Lur'ye's stability criterion, its modification, and special cases; A.M. Letov's and I.G. Malkin's criteria; simplified stability criteria, derived by the author on the basis of Lyapunov's direct method; and finally, the behavior of control systems on the boundary of the stability region. The author thanks Professor A.I. Lur'ye and Docent O.A. Zhautykov. There are 68 references, all Soviet.

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Card-2/6

BEDEL'BAYEV, A.K.

Report to be presented at the 1st All Union Congress of the Inst. Federation of Automatic Control, 25 Aug-5 Sept 1960, Moscow, USSR.

ADDELL, D. - "Comparing thermodynamic and analytical methods".
ADENBERG, E. - "Method of determining the optimal dynamic system according to the criterion of the functional criteria, which is a given function of several other functions".
AKHIEZER, M. A., and GANTCHAROV, P. F. - "Some problems of the theory of automatic systems of automatic regulation with discontinuous characteristics".
BAGINSKIY, S. A. - "Concerning the organization of the TAYTOK Function for nonlinear systems".
BAGINSKIY, S. A. - "Optimal methods of synthesis of nonlinear systems of automatic regulation".
BAGINSKIY, S. A. - "Problems of the application of high-speed computers for automatic control".
BAGINSKIY, S. A. - "The theory of stability of regulation systems consisting of nonlinear elements".
BAGINSKIY, S. A., and TAL'KIN, A. A. - "Automatic linear interpolator for programs".
BAGINSKIY, S. A., and TAL'KIN, A. A. - "Theoretical ability of programs".
BAGINSKIY, S. A., and TAL'KIN, A. A. - "Optimization of the propeller characteristics of the electric motor".
BAGINSKIY, S. A., and TROTSKY, B. M. - "Application of the equivalent transmission function in the calculation of follower systems by the successive approximation curve method".
BAGINSKIY, S. A., and TROTSKY, B. M. - "Optimization of the characteristics of mathematical systems with temporary separation of channels".
POLYAKOV, Y. G., GANZHELEV, P. F., KUCHENKO, V. F., and POLYAKOV, L. S. - "The Maxmin principle in the theory of optimal processes".
POLYAKOV, Y. G., and TROTSKY, B. M. - "Automatic electric drives of a multilayered plant".
SABUROV, Z. A. - "Automatic regulation of front-layer processes in multilayer metallurgy".

L 19317-63
ACCESSION NR: AR3005861

EWT(d)/FCC(w)/BDS ... AFFTC/IJP(C)

S/0271/63/000/007/A039/A039

X B

SOURCE: RZh. Avtomatika, telenmekhanika i vychislitel'naya tekhnika. Abs. 7 A236

AUTHOR: Bodal'bayev, A. K.TITLE: An approach to the problem of evaluating square integral criteria of the quality of transient processes in stable mechanical systems described by linear differential equations with variable coefficients

CITED SOURCE: Sb. nauchn. tr. Kazakhsk. politekhn. in-t, no. 21, 1960, 218-224

TOPIC TAGS: evaluation, criteria, transient process, stable mechanical system

TRANSLATION: Practical evaluations of square integral criteria of the quality of transient processes in stable mechanical systems are proposed. The author considers a system whose perturbed motion is described by the system of equations

$$x_s = \sum_{k=1}^n p_{sk}(t)x_k, (s = 1, 2, \dots, n)$$

where $p_{sk}(t)$ are real, continuous, and bounded functions for all $t \geq 0$. The

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quality of a transient process of the system is evaluated by the integral

$$J = \int_0^{\infty} \sum_{S=1}^n x_s^2(t) dt.$$

The process is considered best when the values of J are least for given initial conditions. The conditions for stability, also the asymptotic stability of such a system are found. The dependence of the quantity J on the value of the roots of the equation consisting of the coefficients of the system (I) is established. This evaluation can serve as a basis for selecting constructive parameters that will ensure stability of transient motions of such systems; the evaluation will also help to establish the necessary quality of transient processes. A special case of the system (I) is examined in which the coefficient permit the representation

$$p_{sk}(t) = c_{sk} = \mu c_{sk}(t),$$

where c_{sk} are constants such that the characteristic equation of the system

$$x_s \sum_{k=1}^n c_{sk} x_k \quad (s = 1, 2, \dots, n)$$

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has the roots

$\zeta_1, \zeta_2, \dots, \zeta_n$ with $\operatorname{Re} \zeta_s < 0$ ($s = 1, \dots, n$)

(μ is a small parameter whose selection is discussed in the article, $q_{SK}(t)$ are functions of time that are of bounded modulus). Conditions are found which ensure asymptotic stability for this case. Five references are given. B. S.

DATE ACQ: 15Aug63

SUB CODE: IE

ENCL: 00

Card 3/3

16, 6000 (103, 1031, 1132)

*31924
S/102/61/000/006/001/004
D299/D305*

AUTHOR: Bedel'bayev, A. K. (Alma-Ata)

TITLE: On a sufficient stability-criterion for nonlinear combined control systems

PERIODICAL: Avtomatyka, no. 6, 1961, 3-8

TEXT: The boundary of the stability region is determined by means of an inequality. Determination of the largest possible stability region is reduced to constructing the envelope of a family of surfaces in a parameter space. The system with m control elements

$$\begin{aligned}\dot{\eta}_s &= \sum_{k=1}^n b_{sk} \eta_k + \sum_{e=1}^m n_{se} \xi_e \quad (s = 1, 2, \dots, n) \\ \dot{\xi}_e &= f_e(\eta_s), \quad \alpha_e = \sum_{k=1}^n j_{ek} \eta_k - \sum_{p=1}^m r_{ep} \xi_p \quad (e = 1, 2, \dots, m \leq n)\end{aligned}$$

(1)

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On a sufficient ...

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is considered. It is assumed that the nonlinear characteristics $f_\alpha(\sigma_\alpha)$ of servomotors belong to the class of functions

$$\dot{\sigma}_\alpha(0) = 0, \quad \sigma_\alpha f'_\alpha(\sigma_\alpha) > 0 \quad (\sigma_\alpha \neq 0) \quad (2)$$

and that the determinant formed by the coefficients b , j , and n differs from zero. Thereupon, the stability problem for system (1) can be solved by considering the equations

$$\left. \begin{aligned} \dot{x}_s &= \sum_{k=1}^n b_{sk}x_k + \sum_{\alpha=1}^m n_{s\alpha}f_\alpha(\sigma_\alpha) \quad (s = 1, 2, \dots, n) \\ \dot{\sigma}_\alpha &= \sum_{k=1}^n j_{ka}x_k - \sum_{\beta=1}^m r_{\alpha\beta}f_\beta(\sigma_\beta) \quad (\alpha = 1, 2, \dots, m) \end{aligned} \right\} \quad (4)$$

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Lyapunov's function for the system (4) is sought in the form

$$v = Q(x) + \sum_{\alpha=1}^m \int_0^{\sigma_\alpha} f_\alpha(\sigma_\alpha) d\sigma_\alpha \quad (5)$$

where $Q(x)$ is the positive definite form

$$Q(x) = \sum_{\alpha=1}^n \sum_{\beta=1}^n \sigma_\alpha x_\alpha x_\beta \quad (6)$$

The time derivative of the function (5) can be expressed in the form

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$$v = - \sum_{s=1}^n \sum_{k=1}^n a_{sk} x_s x_k - \sum_{\alpha=1}^m \sum_{\beta=1}^m r_{\alpha\beta} f_{\alpha}(\sigma_{\alpha}) f_{\beta}(\sigma_{\beta}) \quad (7)$$

provided the conditions

$$\begin{vmatrix} a_{11} & a_{12} & \dots & a_{1k} \\ a_{21} & a_{22} & \dots & a_{2k} \\ \dots & \dots & \dots & \dots \\ a_{k1} & a_{k2} & \dots & a_{kk} \end{vmatrix} > 0 \quad (k = 1, 2, \dots, n) \quad (8)$$

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a similar condition for r , and

$$\sum_{s=1}^n (\sigma_{sk} + \sigma'_{ks})m_s + p_k = 0 \quad (k = 1, 2, \dots, n) \quad (10)$$

hold. After substitution and expansion of the determinant, it is possible to express (8) in the form

$$R(p_1, p_2, \dots, p_n, a_{sk}) > 0 \quad (12) \quad \times$$

The boundary of the stability region, determined by this inequality, forms in controller-parameter space a family of surfaces

$$R(p_1, p_2, \dots, p_n, a_{sk}) = 0 \quad (13)$$

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which depends on the parameters a_{sk} ($s \neq k$). The envelope of this family of surfaces can be determined (if it exists) from Eq. (13). The inequality,

$$R^*(\rho_1, \rho_2, \dots, \rho_n) > 0 \quad (14)$$

obtained by the elimination of a_{sk} , determines the stability region of system (4) in parameter space. This region will be largest if the envelope of the family of surfaces (13) exists and is given by

$$R^*(\rho_1, \rho_2, \dots, \rho_n) = 0$$

Further, the particular case $n = m = 2$ (in Eq. (10)) is considered. In this case, the boundary of the stability region is in the form of a pair of straight lines (determined from

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$$A\rho_1^2 + 2B\rho_1\rho_2 + C\rho_2^2 = 0 \quad (21)$$

As an example, the control system of a steam turbine is considered.
There are 1 figure and 4 Soviet-bloc references.

SUBMITTED: March 8, 1960

X

Card 7/7

16.80-0

S/024/61/000/006/007/019
E140/E335

AUTHOR: Bedel'bayev, A.K. (Alma-Ata)

TITLE: Use of Lyapunov's function for optimizing linear control systems

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Energetika i avtomatika, no. 6, 1961, 52 - 59

TEXT: The problem considered in this paper is to determine a control function for a multidimensional linear system so that the system be asymptotically stable and optimal in the sense of the minimum of a functional. This problem has been considered in other papers; in the present paper the direct Lyapunov method, combined with the well-known Lagrange variational method, is applied. The method gives fully satisfactory results with suitable choice of coefficients in a certain positive definite quadratic form. A numerical example is given to illustrate the method. There are 4 Soviet-bloc references. ✓
B

SUBMITTED: April 17, 1961
Card 1/1

BEDEL'BAYEV, A.K. (Alma-Ata)

Problem on the determination of the stability limit of nonlinear
control systems. Avtom.i telem. 22 no.7:831-833 Jl '61.

(MIRA 14:6)

(Automatic control)

PENTKOVSKIY, M.V., otv. red.; ZHAUTYKOV, O.A., red.; MOLYUKOV, I.D.,
red.; PERSIDSKIY, K.P., red.; YATAYEV, M., red.; BEDEL'HAYEV, A.K., red.;
OSADCHIY, F.Ya., red.; SHEVCHUK, T.I., red.; ALPEROVA, P.F.,
tekhn. red.

[Transactions of the Second Republic Conference on Mathematics
and Mechanics] Trudy Vtoroy respublikanskoy konferentsii po ma-
tematike i mekhanike. Alma-Ata, Izd-vo Akad.nauk Kazakhskoy
SSE, 1962. 183 p. (MIRA 15:7)

1. Respublikanskaya konferentsiya po matematike i mekhanike,
2d, Alma-Ata, 1959.

(Mathematics—Congresses) (Mechanics—Congresses)

BEDEL'BAYEV, A. K.

One Sufficient Stability Criterion for Indirect-control Systems p. 122

TRANSACTIONS OF THE 2ND REPUBLICAN CONFERENCE ON MATHEMATICS AND MECHANICS
(TRUDY VTOROY RESPUBLIKANSKOY KONFERENSI PO MATEMATIKE I MEKHANIKE), 184
pages, published by the Publishing House of the AS KAZAKH SSR, ALMA-ATA, USSR, 1962

3637^P
S/103/62/023/004/010/011
D299/D301

16,800

AUTHOR: Bedel'bayev, A.K. (Alma-Ata)

TITLE: On the theory of stability of unsteady motions of nonlinear automatic control-systems

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 4, 1962,
540 - 542

TEXT: The boundary of the stability region of unsteady motions of nonlinear systems is determined by the method of Lyapunov functions. The indirect control system

$$\dot{\eta}_s = \sum_{k=1}^n b_{sk}(t) \eta_k + n_s(t) \xi \quad (s=1, 2, \dots, n). \quad (1)$$

$$\dot{\xi} = f(\sigma), \quad \sigma = \sum_{k=1}^n j_k \eta_k - r \xi.$$

is considered; it is assumed that $b_{sk}(t)$ and $n_s(t)$ are real functions of time; j_k and r are constant parameters of the controller.

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On the theory of stability of ...

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The problem consists in finding a pair of non-negative numbers H_1 and H' ($H_1 < H'$), so that system (1) should be asymptotically stable in the large for any nonlinear function $f(\sigma)$, which satisfies the conditions

$$f(0) = 0, \quad H_1 < \frac{f(\sigma)}{\sigma} < H' \quad (\sigma \neq 0). \quad (2)$$

It is shown that this problem can be readily solved by the method of Lyapunov's v-functions, as had been done by the author (in an earlier work) for systems with constant coefficients. A transformation is effected, whereby system (1) becomes:

$$\begin{aligned} \dot{x}_s &= \sum_{k=1}^n q_{sk}(t) x_k + p_s(t) \sigma + n_s(t) f(\sigma) \quad (s=1, 2, \dots, n), \\ \dot{\sigma} &= \sum_{k=1}^n j_k x_k - r/f(\sigma), \end{aligned} \quad (4)$$

where q and p are given by expressions involving the coefficients b_{sk} and the determinant B (with elements b and j). Two positive-de-

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On the theory of stability of ...

finite quadratic forms are set up (with terms $a_{sk}(t) x_s x_k$ and $\sigma_{sk}(t) x_s x_k$). Lyapunov's function for system (4) is constructed in the form

$$v = Q + \int_0^\sigma \Psi(\sigma') \sigma' d\sigma', \quad \Psi(\sigma) = \frac{1}{\sigma} f(\sigma).$$

Thereupon one obtains

$$az^2 + 2bz + c < 0 \quad (z = \Psi(\sigma)), \quad (9)$$

where a , b , and c are quadratic forms. Owing to the positive-definiteness of the earlier quadratic form, inequality (9) holds only if $a < 0$; therefore the equation $az^2 + 2bz + c = 0$, has only one positive root $m(t)$. Denoting by H' the upper bound of $m(t)$ for all $t \geq t_0$, one finally obtains (by virtue of (9)):

$$f(\sigma)/\sigma > H' \quad (\sigma \neq 0). \quad (11)$$

If this condition is satisfied, system (1) is asymptotically stable in the large. Depending on the choice of Lyapunov's function for system (4), various boundaries of the region (H_1 , H') can be obtained. The nonlinear function $f(\sigma)$ (in condition (2)), can be replaced by

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On the theory of stability of ...

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a function of time $\varphi(t)$, satisfying same conditions. There are 4
Soviet-bloc references.

SUBMITTED: January 4, 1962

Card 4/4

BEDEL'BAYEV, A.K.

Stability criteria for nonlinear regulated systems based on the method for finding envelopes. Trudy Sekt. mat. i mekh. AN Kazakh. SSR 2:52-59 '63.

Absolute stability of nonlinear regulated systems with many controls. (60-66) (MIRA 16:10)

L 17690-65 EWT(d)/EPP(n)-2 Po-4/Pq-4/Pg-4/Pu-4/Pk-4/Pl-4 IJP(c)/AFMDC/
ASD(a)-5/SSD/AFETR/RAEM(a)/AFTC(p)/RAEM(d)/ESD(dp) W/BC
ACCESSION NR: AP4049395 S/0361/64/000/002/0008/0015

AUTHORS: Bedel'bayev, A. K.; Khodzhanov, A. S.

TITLE: Contribution to the mathematical theory of optimal control processes

SOURCE: AN KazSSR. Izvestiya. Seriya fiziko-matematicheskikh nauk,
no. 2, 1964, 8-15

TOPIC TAGS: automatic control system, stability condition, optimal control theory

ABSTRACT: The present article is concerned with optimization of a control system both with respect to its parameters and with respect to the control function, whereas earlier papers dealt with only one type of optimization exclusively. The problem is formulated as follows: Given an automatized object whose behavior is characterized by the linear differential equation

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L 17680-65

ACCESSION NR: AP4049395

$$\eta_s = \sum_{i=1}^n b_{is} \eta_i + n_s t \quad (s = 1, 2, \dots, n),$$

where b and n are constants, with the b 's depending on certain "constructive" parameters, η -phase coordinates of the object, and ξ -- its control function (coordinate of the regulating organ of the object). It is required to determine the control function ξ from among the class of continuous and continuously-differentiable functions and the constructive parameters such that the closed-loop control system be not only asymptotically stable but also optimal. The optimization condition is that a certain functional

$$I(t) = \int_0^T [F(\eta) + \frac{1}{2} C_v v^2 + \frac{1}{2} \dot{v}^2] dt$$

be minimized. Algebraic equations are written out for the constructive parameters and methods of minimizing the functional, using the

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L 17680-65

ACCESSION NR: AP4049395

Lyapunov theorem, are described. A numerical example is given.
Orig. art. has: 24 formulas.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 00

SUB CODE: IE, MA

NR REF Sov: 004

OTHER: 000

Card 3/3

L 58920-65 ENT(d)/EWP(r)/T/EWP(k)/EWP(h)/EWP(l) Pr-4 IJP(c)

ACCESSION NR: AR5016490

UR/0124/65/000/006/A009/A010

SOURCE: Ref. zh. Mekhanika, Abs. 6A75

AUTHOR: Bedel'bayev, A. K.

TITLE: Stability criteria for nonlinear controlled systems in a sector

CITED SOURCE: Tr. Mezhevuz. konferentsii po prikl. teorii ustoychivosti dvizheniya i analit. mekhan., 1962. Kazan, 1964, 77-81.

TOPIC TAGS: nonlinear control system, absolute stability, stability condition, Lyapunov function

TRANSLATION: The indirect control system

$$\dot{x}_i = \sum_{j=1}^n b_{ij}x_j + r_i(\sigma), \quad i=1, 2, \dots, n$$

$$\dot{r} = \sum_{i=1}^n l_i x_i - r_i(\sigma)$$

is considered. By analysis of the Lyapunov function of the form, quadratic form
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ACCESSION NR: AR5016490

plus nonlinearity integral, the following theorem is proven: if $f(0) = 0$ and $0 < (f'(\delta)/\delta) < +\infty$ for $\delta \neq 0$, then it is sufficient for absolute system stability that the inequalities $r > 0$, $b < 0$, $b^2 > 4ac$ be satisfied, where a , b , and c are known functions of the system parameters and elements of an arbitrary positive-definite matrix of n -th order. A. Kh. Gelig.

SUB CODE: IE, MA

ENCL: 00

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Card 2/2

BEDEL'BAYEV, A.K. [deceased] (Alma-Ata); KHODZHANOV, A.S. (Alma-Ata)

Isoperimetric problems of regulated systems. Avtom. i
telem. 26 no.5:764-769 My '65. (MIRA 18:12)

1. Submitted April 20, 1964.

I-26014-66 EWT(d) IJP(c) GS

ACC NR: AT6013426

SOURCE CODE: UR/0000/65/000/000/0134, 0141

AUTHORS: [Bedel'bayev, A. K. (deceased)], Khodzhanov, A. S.

33

B+1

ORG: none

TITLE: Analytic design of optimal regulators

SOURCE: AN KazSSR. Sektor matematiki i mekhaniki. Issledovaniya po differential'nym uravneniyam i ikh primeneniyu (Research on differential equations and their application). Alma-Ata, Izd-vo Nauka, 1965, 134-141

TOPIC TAGS: optimal control, variational problem, characteristic equation, control system stability, functional equation, motion equation

ABSTRACT: The problem of stability of an optimal control system is supplied by the functional

$$J(t) = \int_0^t [F(\eta) + C] dt.$$

The work is based on a variational problem formulated by A. M. Letov (Analiticheskoye konstruirovaniye reguljatorov. Avtomatika i telemekhanika, Vol. XXI, Nos. 5 and 6, 1960). The equations of motion of the controlled object are

$$\eta_s = \sum_{k=1}^n b_{sk} \eta_k + n_s t \quad (s = 1, 2, \dots, n).$$

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L 26014-66

ACC NR: AT6013426

In the case of

$$\sum_{k=1}^n \mu_k - 2C\varphi(u) = 0 \quad (|u| < u^*),$$

the characteristic equation is

$$\Delta(r^*) - CD(r)D(-r) + \sum_{m=1}^M \sum_{n=1}^N a_{mn} N_m(-r) N_n(r) = 0,$$

Two examples with motion according to the equations

$$\ddot{\varphi} + 14.3\dot{\varphi} + 115.5\varphi = -3.54\psi.$$

and

$$\ddot{\eta} + 3\dot{\eta} + 2.38\eta = 2.5\xi$$

are given for which the conditions of stability are found. Orig. art. has: 49 formulas and 1 figure.

SUB CODE: 12 / SUBM DATE: 23Jun65 / ORIG REF: 003

Card 2/2

BEDELEANU, DAN

Dan 488
Thiourea derivatives. Alexandru Silberg, Dumitru Tefta,
and Dan Bedleanu. Acad. rep. populare Române, Filiala
Cluj, Studii cercetăriști, 3, No. 1/2, 70-5 (1952).—The
following RNHCSNHR' were synthesized by heating an
amine, RNH₂, and an isothiocyanate R'NCS with or without
solvent (pyridine) on a water bath (starting materials, and
m.p. given): α-aminopyridine (I) and CH₃CH₂NCS (II), 108° (from 1:1 EtOH-H₂O); I and PhNCS (III), 173°
(from AcOH); I and 1-C₆H₅NCS (IV), 197-8° (from
AcOH); 2-amino-4-methylthiazole (V) and II, 180° (from
EtOH); V and III, 174° (from EtOH); V and IV, 180°
(from AcOH); 2,4-HO(H₂N)C₆H₃CO₂H (VI) and II, 173°
(decompn.) (from EtOH); VI and III, 184° (from EtOH);
VI and IV, 185° (from C₆H₅N-RIOH). In the expts. with VI,
VI was dissolved in aq. Na₂CO₃ (1 g., VI, 2 ml. H₂O, and 0.8
g. Na₂CO₃), EtOH added and then the isocyanate, and the
mixt. boiled a few min., dild. with H₂O, and acidified with
HCl to ppt. the thiourea. Krikor L Reitman.

Bedelconu, Dan

1. In a 100 ml. round-bottom flask, 1.0 g. of 2-acetyl-
benzonitrile and 1.0 ml. acetonitrile were heated at 100°C.
cooling the simpy liquid crystallizes to give 2-Acyl-N,N-dimethyl-
benzylammonium bromide in 70% yield.

2. A 100 ml. round-bottom flask was charged with
1.0 g. of 2-acetylbenzonitrile, 1.0 ml. acetonitrile,
1.0 ml. concentrated HBr and 1.0 ml. concentrated
HNO₃. After 20 hrs. the reaction mixture
was cooled to room temperature and the
solid product was collected by vacuum
filtration. Yield: 2-Acyl-N,N-dimethyl-
benzylammonium nitrate in 70% yield.

"APPROVED FOR RELEASE: 06/06/2000

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APPROVED FOR RELEASE: 06/06/2000

CIA-RDP86-00513R000204120018-3"

MANTA, I., prof.; BEDELEANU, D.; CAPILNA, S.; MURESAN, Letitia; GORUN,
Victoria

On certain biochemical changes in experimental atherosclerosis.
Rumanian M Rev. no.1:181-182 Ja-Mr '61.

1. The Chair of Biochemistry of the Medicopharmaceutical Institute,
Cluj, Head of the Chair; Prof. I. Manta.
(ARTERIOSCLEROSIS chemistry) (LIPIDS metabolism)
(COPPER metabolism) (COENZYMES metabolism) (NITROGEN metabolism)

35/16 to H.A. MU, DA-13
L - Nitrogen metabolism under different conditions of work and temperature. I. Experimental studies with laboratory animals. Elena Maftei, Dan D. Bedecleanu, Sabina Tragor, Mirca Virgil, and Ioan Badin (M. F. Bocionis, Inst. Cluj, Rumania). Acad. Rep. Patchere Raetzer, Studii Cercetari Stiint. 3, 395-409 (1954) (Biorch summary). At equal caloric intakes, white mice kept 1 week at 40° excreted less N but also emerged weighing less than control mice kept at room temp. In the week succeeding the exp't. the test mice gained more wt. than the controls, indicating that the stored N was eventually utilized. II. The nitrogen metabolism in people working under conditions of elevated temperatures. The effect of caloric intake. Elena Maftei, Sabina Tragor, Dan Bedecleanu, and Ioan Badin. Ibid. 401-11.—Workers exposed to higher than normal temps. (furnace operators, etc.) were fed a supplemental caloric diet for 1 week and their metabolism during that time was compared with a 1-week period without addnl. caloric intake. With addnl. food (260 g. meat, 60 g. butter, 2 boiled eggs, and 200 g. bread/day) the urine increased in vol. (9.7%), residue (16%), N (21%), creatinine (37%), and urea (42%). The d. of the urine did not change. Fecal wt. increased by 10%, its dried residue by 24%, and its N content by 35%. Gary Gerard

(4)

RUMANIA/Human and Animal Physiology - Metabolism.

T-2

Abs Jour : Ref Zhur - Biol., No 7, 1958, 31472

Author : Maftei Elena, Bedeleanu Dan D, Tragor Sabina

Inst : -

Title : Excretion of Vitamin B₆ in Urine in Animals Due to a Reaction of Tension Caused by Different Temperature.

Orig Pub : Studii si cercetarimed. Acad. RER Fil. Cluj, 1956, 7, No 1-4, 61-73.

Abstract : After the introduction of 10 mg of vitamin B₆ in normal rats, its excretion in urine was found in usual cases to comprise ~35%. In animals kept in a treadmill at room temperature, and in animals in a treadmill at 40-50°, the excretion of B₆ in urine after its injection increased in approximately the same degree, comprising respectively 83% and 80%.

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- 19 -

BEDALEANU, D.

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|--|---|
| <p>1. "Problems of Pharmacy at the Fifth International Congress of Biochemistry", Moscow 1968 August 1968; <i>Persoanele si Cercetari din Laboratorul de Biochimie al Institutului Nafto-Industrial Bucuresti (I.N.P.I.)</i>, Bucharest; pp. 16-18.</p> | <p>2. "Contributions to the Manufacturing and Validation of Chemicals in Our Country", <i>Persoane si Cercetari</i>, Bucharest; pp. 16-18.</p> |
| <p>3. "New Drugs", <i>Drugs and Standard Preparations</i>, Prof. G. STOICESCU, Prof. A. SPANU, Prof. M. V. STOICESCU, Prof. M. H. POPESCU, Prof. M. I. BOGDAN, Prof. I. NEGRONI, Prof. M. RADU, Prof. M. I. NEGRONI, and Prof. CORNELIU PETRESCU, <i>Institutul de Chimie Farmaceutica</i> (Laboratorul de Farmacochimie), <i>Institutul de Chimie Organica</i> (Institutul de Chimie, Academiei Române), Bucharest; pp. 16-17.</p> | <p>4. "Chromatographic Study of the Antibiotics of Soviet and Cuban Origin", In the <i>Romanian People's Republic (1968)</i> (Proceedings of the Conference of the Ministry of Agriculture, Research Institute for the Chemical Industry and Research Institute for the Agricultural Chemistry and Agricultural Investigations (Institutul Național de Cercetare și Dezvoltare în Cercetarea Farmaceutică), Bucharest; pp. 159-167.</p> |
| <p>5. "On the Antidiabetic Activity of Certain New Synthetic Substances of the Benzodiazepine Series", <i>Inventorii români</i>, Prof. A. STOICESCU, Dr. VIOREL DRĂGĂNESCU, Dr. MIROSLAV COZĂL, Dr. GHEORGHE DRĂGĂNESCU, Prof. V. VASILESCU, Dr. TUDOR GHEORGHE, Dr. P. DĂBĂSĂ, Dr. T. ANDRONICOIU, Dr. G. COZĂL, Dr. L. COZĂL, Dr. T. COZĂL, and Dr. M. COZĂL, <i>Cercetări de Producție si Rezultate la Laboratorul de Cercetare și Dezvoltare a Producției de Farmacoactive</i> (Institutul de Farmacoactive, <i>Nafto-Industrial Bucuresti</i>), Bucharest; pp. 161-171.</p> | <p>6. "Electrochromogenic Determination (EDT)", Colonel PROF. DR. G. ADRIAN, <i>Clinica Militară Centrală de Recuperare a Milicei Centrală</i>; pp. 173-176.</p> |
| <p>7. "New Data Concerning the Organization of the Botanical Gardens in Bucharest", C. BERNICI and V. C. DINI; pp. 177-180.</p> | |

MANTA, I.; BEDELEANU, D.

Contributions to atheromatosis biochemical research.
Rev chimie 7 no..1: 317-325 '62.

1. Medizinisch-Pharmazeutisches Institut, Lehrstuhl
fur Biochemie, Cluj.

MANTA, I.; BEDELEANU, D.; BIRZU, O.

Biochemistry of atheromatosis. Pt. 6. Studii cerc biochimie
7 no.1:9-17 '64.

1. Department of Biochemistry of the Medicopharmaceutical
Institute, Cluj.

BULGARIA/Chemical Technology Chemical Products and Their
Applications. Dyeing and Chemical Treatment of
Textiles.

K-6

Abs Jour: Ref Zhur-Khimiya, 1958, No 1, 3334.

an autoclave. The use of $(COOH)_2$ for diluting S is more
advantageous than that of chloramine for the same pur-
pose.

Card : 2/2

BEDELYAN, O.
APPROVED FOR RELEASE: 06/06/2000 CIA-RDP86-00513R000204120018-3"
BULGARIA / Chemical Technology. Chemical Products and Their H-34
Application. Dyeing and Chemical Treatment of
Textiles.

Abs Jour : Ref Zhur - Khim., No 3, 1958, No 10,092

Author : Bedolyan, O.

Inst : Not given

Orig Pub : Loka promishlonost, 1956, 5, No 6, 10-15

Title : Finishing Cellulosic Fabrics with Synthetic Resin in Order
to Impart Wrinkle Resistance and Reduced Shrinkage.

Abstract : On the basis of Soviet experience, the technology of fin-
ishing cotton and rayon fabrics with melamine-formaldehyde
and urea-formaldehyde resins was developed. NH_4Cl was
used as catalyst. The impregnated and well-wrung fabrics
were dried at 60-70° C in an air dryer, the condensation
was performed in drum dryers at 115-120° C. Calendoring
the fabrics improved their lustre and feel. The best re-
sults were obtained by use of melamine-formaldehyde-type
resins.

BEDELIAN, O.

Cause of stripes forming on cotton material and how to partially remove them after tinting. p. 25. LEKA PROMISHLENOST. Sofiya. Vol. 5, no. 2, 1956.

SOURCE: East European Accessions List. (EEAL) Library of Congress. Vol. 5, No. 8, August 1956.

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BEDELIAN, O. Steadiness of rubbing in the coloring of cotton yarn and fabrics.
p. 25. Vol. 5, no. 8, 1956 ELEKTROENERGIIA. Sofiia, Bulgaria

SOURCE: East European Accessions Lists (EEAL) Vol 6, No. 4--April 1957

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Planning new fabrics by the method of Hermann Rotter.

P. 13, (Lika Promishlenost) Vol. 6, no. 2, 1957, Sofia, Bulgaria

SO: Monthly Index of East European Acessions (EEAI) Vol. 6, No. 11 November 1957

BEDELIAN, O.; STOIANOV, V.

Weaving in and shrinking of cotton textiles. p. 41

TEKSTILNA PROMISHLENOST. (Ministerstvo na lekata promishlenost) Sofia, Bulgaria.
Vol. 8, no. 7, 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 7, Nov. 1959
Uncl.

BEDELOV, G.

~~Extend the budgetary rights of autonomous republics and provinces.~~
Visnyk AN URSR 28 no.3:46-48 Mr '57. (MLRA 10:5)

1. Ministr finansov Dagestanskoy ASSR.
(Russia--Economic policy)

BEDELOV, G.

Economic and cultural flourishing of Daghestan. Fin.SSSR
21 no.4:25-28 Ap '60. (MIRA 13:4)

1. Ministr finansov Dagestanskoy ASSR.
(Daghestan--Budget) (Daghestan--Economic conditions)

BEDELOV, G.

For successfully carrying out financial plans. Fin. SSSR
no.8:50-52 Ag '61. (MIRA 14:8)

1. Ministr finansov Dagestanskoy ASSR.
(Daghestan--Finance)

Bedel'yan, L.P.

133-12-6/26

AUTHORS: Bedel'yan, L.P., Zhilyakov, I.G., Kanevskiy, V.M.,
Rysev, A.I., and Urinson, A.I., Engineers.

TITLE: Operation of 185-ton Open Hearth Furnaces on Natural Gas
(Rabota 185-t martenovskikh pechey na prirodnom gaze)

PERIODICAL: *Stal'*, 1957, No.12, pp. 1082 - 1085 (USSR).

ABSTRACT: Operation of a 185-ton open hearth furnace fired with natural gas carburised with fuel oil is described. Originally designed and actually used gas-oil burners are shown in Figs. 1 and 2, respectively, and the gas installation used in Fig. 3. For the atomisation of the fuel oil, the use of gas and steam was tried. Operational indices of best heats and a comparison of the furnace operation when fired with gas-fuel oil, gas-fuel oil (atomised with steam) and fuel oil alone are given in Tables 1 and 2, respectively. It is concluded that on transfer of furnace from oil to natural gas (10 atm.) firing the output will not decrease only if high pressure superheated steam is used for the atomisation of fuel oil. The flame obtained with natural gas, carburised with 25% of oil has similar properties as fuel-oil flame. A proposal is made to carry out experiments on firing an open hearth furnace with natural gas preheated to 250-300 °C, as well as with gas of increased pressure (13 - 15 atm.). There are 2 tables and 3 figures.

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133-12-6/26
Operation of 185-ton Open Hearth Furnaces on Natural Gas

ASSOCIATION: Taganrog Metallurgical Works im. Andreyev
(Taganrogskiy metallurgicheskiy zavod imeni
Andreyeva)

AVAILABLE: Library of Congress

Card 2/2

BEDEN, Artur, mgr inż.

A drill bit with asymmetric edges for drilling deep holes in
gypsum with PBS-10 drilling rig. Przegl gorn 18 no 7/649-452
Jl-wag '62.

L 37094-56 EWT(1)/EWT(m)/T/EWP(t)/ETI IJP(c) CG/AT/WN/JD
ACC NR: AF6018137 SOURCE CODE: UR/0251/66/041/001/0045/0048

AUTHOR: Nakashidze, G. A.; Abramov, S. M.; Bedenashvili, B. G.; Machkalova, N. P.; Kandelaki, M. O.; Kutaladze, L. M.; Peskov, O. G.

ORG: Academy of Sciences, Georgian SSR, Institute of Cybernetics (Akademiya nauk Gruzinskoy SSR, Institut kibernetiki)

TITLE: Semiconductor source of visible radiation

SOURCE: AN GruzSSR. Soobshcheniya, v. 41, no. 1, 1966, 45-48

TOPIC TAGS: light source, gallium compound, phosphide, pn junction, photoelectric property, semiconductor diode, semiconductor carrier, forbidden band, volt ampere characteristic

ABSTRACT: The authors describe a diode emitting visible light, based on gallium phosphide with diffusion n-p junction, and describe some of its photoelectric characteristics. The light radiated by the diode is produced by recombination of non-equilibrium carriers through the impurity levels in the forbidden band, or by band-band recombination (Fig. 1). The volt-ampere characteristics taken at room temperature and at liquid-nitrogen temperature exhibit a sharp breakdown in both the forward and inverse directions. The spectrum at liquid-nitrogen temperature has three peaks at 7100, 6140, and 5650 Å, which successively decrease in amplitude with decreasing wavelength. There is no adequate explanation for the structure of the spectrum. According to preliminary data, the time constant of the radiation is 2×10^{-7} sec. The

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